



Alto L-Band Redundant Amplifier

with low noise, high linearity, variable gain and slope control

Typical applications:

- Teleports & Earth Stations
- Satellite Operations
- Government & Defence applications
- Telemetry, Tracking & Command
- High Resilience applications

The L-band redundant low noise amplifier module is designed to work in the Genus 1U redundant chassis range, operating over 850-2150 MHz. The module has low noise, high linearity, with variable gain and slope control.

Amplifier Module



Amplifier Module

Compact form factor allowing multiple modules to be housed in the Genus chassis. Each module occupies 1 slot in the chassis.



Hot Swap & replaceable RF Amplifier module



Variable Gain & Slope

For balancing input signals.



L-Band 850-2150 MHz operating frequency range



Low Noise

For prime signal quality



High Linearity

Ensures overall RF gain signal performance is optimised

Chassis Options



Local control & monitoring via HMI high resolution touchscreen



Flexible Module Configurations choose from a mixture of amplifier modules with different operating frequencies.



Resilience from dual redundant hot -swap power supplies & field replaceable CPU & HMI



Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface



Compact indoor chassis options, which can be part populated



Field replaceable Internal 10MHz reference source and external reference inject port with auto detection (optional)



Secure protocols with SNMPv3 and HTTPS



Indoor Chassis





1:1 Redundant Amplifier Module - RF Parameters	
Model Numbers	ALT-G1R-L1-105 (The spec below is for ALT-G1R-L1-105 in 1:1 redundancy configuration with SWF-G1R-SX-101)
Frequency Range	850-2150 MHz
RF Connectors	50Ω SMA
Gain (dB)	Max. 28±2.0
	Min. -2±2.0
Gain Flatness (dB)	850 to 2150 MHz ±0.75
	Any 36MHz ±0.25
Gain Steps (dB)	0.25±0.15
Slope Control Range (dB)	0 to 6. Pivot point at 2150 MHz
Slope Control Steps (dB)	1±0.25
Input Return Loss	16dB typ. 12 dB min
Output Return Loss	16dB typ. 12 dB min
Isolation (dB)	60dB Typ. 50dB Min. With amplifiers set at the same gain level. Worst case isolation is between adjacent amps, isolation degrades dB-to-dB for different gain levels.
Reverse Gain (dB)	< -60 Typical
Noise Figure (dB)	Typ. 8 At max gain setting
	Max. 10 At max gain setting
1dB GCP (dBm)	Typ. 21 At max gain setting
	Min. 18 At max gain setting
OIP3 (dBm)	Typ. 31 At max gain setting
	Min. 28 At max gain setting
OIP2 (dBm)	Typ. 42
	Min. 38
In band, signal independent spuri	<-85dBm max. Very low level spuri from CPU clock, switch mode PSU and other control electronics inside the chassis
MTBF	>150,000 hrs. MTBF of each amp module. These are hot-swap
Maximum Input Level	+20dBm. For no damage. None operational.
LNB Power	No
Capacity	1 Slot
Spec Version	1.0

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

Note 3: All specs are for 50 Ohm connectors unless detailed otherwise.

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2+1 Redundant Amplifier Module - RF Parameters	
Model Numbers	ALT-G1R-L1-105 (The spec below is for ALT-G1R-L1-105 in 2+1 redundancy configuration with SWF-G1R-SX-114)
Frequency Range	850-2150 MHz
RF Connectors	50Ω SMA
Gain (dB)	Max. 25±2.0
	Min. -5±2.0
Gain Flatness (dB)	850 to 2150 MHz ±0.8
	Any 36MHz ±0.25
Gain Steps (dB)	0.25±0.15
Slope Control Range (dB)	0 to 5. Pivot point at 2150 MHz
Slope Control Steps (dB)	1±0.25
Input Return Loss	14dB typ. 10 dB min
Output Return Loss	14dB typ. 10 dB min
Isolation (dB)	60 dB Typ 50 dB Min With amplifiers set at the same gain level. Worst case isolation is between adjacent amps, isolation degrades dB-to-dB for different gain levels.
Reverse Gain (dB)	< -60 Typical
Noise Figure (dB)	Typ. 10 At max gain setting
	Max. 12 At max gain setting
1dB GCP (dBm)	Typ. 19 At max gain setting
	Min. 16 At max gain setting
OIP3 (dBm)	Typ. 29 At max gain setting
	Min. 26 At max gain setting
OIP2 (dBm)	Typ. 47
	Min. 44
In band, signal independent spuri	<-85dBm max. Very low level spuri from CPU clock, switch mode PSU and other control electronics inside the chassis
MTBF	>150,000 hrs. MTBF of each amp module. These are hot-swap
Maximum Input Level	+20dBm. For no damage. None operational.
LNB Power	No
Capacity	1 Slot
Spec Version	1.0

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